

Final summarized insights and explanations.

The notebook merges a daily crypto Fear & Greed index with a large trades dataset, aligns both on date, and filters rows with valid sentiment classes before plotting three analyses: number of trades by sentiment, distribution of per-trade PnL by sentiment, and total traded USD volume by sentiment; the attached screenshots match these plots, showing highest trade count during Fear, mid counts at Greed/Neutral, and lowest at Extreme Fear, while the volume bar chart indicates Fear also leads total USD volume with Greed second, and the stacked bar shows SELL slightly exceeding BUY in Fear and Greed, with minor differences in other buckets, and the suggests PnL distributions centered near zero across sentiments with many outliers, implying sentiment shifts alter activity and volume far more than median profitability per trade.

Key explanations and takeaways: preprocessing converts timestamps to dates, inner-merges by date, and drops rows lacking sentiment to minimize leakage; the patterns indicate traders are most active and allocate more capital when the market is in Fear, not just when it is Greed, hinting at dip-buying or forced activity during stress; however, the PnL boxplot clustered around zero across all classes implies typical trade profitability doesn't systematically improve with sentiment regime, so strategy edges likely come from sizing and participation timing rather than per-trade win skew, and the slight SELL>BUY under Fear/Greed suggests distribution between taking profits and capitulation varies with regime; for production, consider using hue instead of palette-only in seaborn to avoid deprecation warnings, controlling for asset/venue via multi-index groupbys, normalizing by day count to compare regimes fairly, and reporting robust metrics (median/iqr PnL, hit rate, expectancy) per sentiment to quantify whether activity/volume surges truly translate into edge.